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ABSTRACT

The implementation of standards-based reform has been a goal of state policy makers for the last 10 years. States have also restructured their governance systems with the intention of distributing more authority to local decision-makers. However, even the high standards of this type of reform, and the strong incentives to encourage the change, are not sufficient. "Capacity-building" strategies, which refer to the need to translate high standards and incentives into effective instruction and strong student performance, must be implemented. These strategies, currently being used in eight states are examined, and their promise and continuing challenges are analyzed. Seven areas of the capacity of classrooms essential to improvement in teaching and learning are discussed. These fall under two main headings: (1) classroom level capacities, and (2) school, district, and state organizational capacities. Then four common capacity-building strategies are described, including building external infrastructure to provide professional development and technical assistance; setting professional development and training standards; providing curriculum materials; and organizing and allocating resources. (Contains 18 endnotes.) (JMD)

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*Graduate School of Education* • *University of Pennsylvania* • *RB-25-July 1998*

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# State Strategies for Building Local Capacity: Addressing the Needs of Standards-Based Reform

**by Diane Massell**

Over the past decade or more, state policymakers have concentrated on putting the architecture of standards-based reform in place: setting challenging academic content standards and performance standards for all students; and instituting compatible tests, incentives, and accountability systems to reinforce these ambitious outcomes. Many states and districts have also restructured their governance systems to delegate more authority to local decision-makers.

But clearly defined learning goals and accountability systems do not by themselves yield continued improvement in student learning. Some states with high standards and related assessment and accountability programs in place are finding that their early gains in student achievement have plateaued in certain academic areas. Furthermore, achievement gaps between students from majority groups and those from minority groups continue to exist, and students with disabilities still have poorer educational outcomes than other students.

Acknowledging that clear standards and strong incentives alone are not sufficient to dramatically change teaching and learning, policymakers and policy analysts have started to talk about and implement "capacity-building" strategies. "Capacity" in this policy context refers to the wherewithal needed to translate high standards and incentives into effective instruction and strong student performance. This issue of *CPRE Policy Briefs* examines capacity-building strategies used in eight states, and analyzes their promise and continuing challenges.

One way of defining capacity is to ask what elements are needed to support effective instruction. People often think of capacity in terms of teachers' knowledge and skills. But effective classrooms also require quality instructional materials and students motivated and ready to learn.[1] And, classrooms exist within larger contexts—the school, the school district, and the state education system—that provide educational direction and leadership, and influence social norms as well as access to resources and knowledge.[2]

The capacity of classrooms and of organizations that support classrooms fall into seven areas we think are essential to generating improvement in teaching and learning.

## Classroom-Level Capacities

**1. Teachers' Knowledge and Skills.** Reform advocates argue that under standards-based policies, teachers must know more about their subject, teach in a more dynamic style, respond to their students' varying levels of knowledge and ways of learning, engage in continuous learning, and often assume new roles under site-based decision-making or other

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decentralized governance structures. Meeting these challenges will take substantial new training and professional development. For instance, more than a quarter of teachers in the U.S. do not have a degree in the subject they teach, have never studied child development, learning and teaching methods, or have never passed tests certifying their knowledge of teaching.[3]

**2. Students' Motivation and Readiness to Learn.** Teachers' effectiveness in the classroom requires that students be willing and able to engage actively in the learning process. But the conditions of many students' lives—poverty, violence, hunger, homelessness, chaos or lack of adult supervision—undermine their motivation and readiness to learn. Nearly one-fifth of American children, and a higher proportion among female-headed households and among black and Hispanic families, live in poverty.[4] Furthermore, students may not have sufficient incentive to perform well on standards-based curricula, especially if achievement on standards-aligned assessments is largely ignored in college admissions and hiring decisions.

**3. Curriculum Materials for Students and Teachers.** High-quality curriculum materials are necessary if not sufficient tools for implementing and achieving educational change. Indeed, the lack of quality, including the tendency of textbooks to cover so many topics in a superficial manner, was the initial impetus for the National Council of Teachers of Mathematics' groundbreaking effort in the 1980s to set academic content standards in K-12 mathematics.[5] Other standards-setting initiatives by the national subject-matter associations and the states were also meant to influence commercial publishers. In spite of some industry response, many teachers and administrators believe the curriculum materials needed to meet standards-based goals in the classroom remain largely unavailable.[6]

## School, District and State Organizational Capacities

**4. Quantity and Types of People Supporting the Classroom.** Many people other than teachers support classroom instruction—from teachers' aides to curriculum specialists and school and district administrators. The number and kinds of people available can influence the way teaching is organized and the way teachers interpret and apply standards in their classrooms.[7]

**5. Quantity and Quality of Interaction Within and Among Organizational Levels.** Well-functioning schools are professional communities in which adults trust each other and communicate openly about their teaching practice. Such an environment encourages innovative and calculated risk-taking behavior, often a prerequisite for reform-minded instruction. Communication between special education and regular classroom teachers, for example, can lead to more effective sharing of academic responsibilities. Professional communities that link teachers across schools can break through the traditional isolation of classroom instruction and enhance teachers' sense of professional efficacy and responsibility.

**6. Material Resources.** A school's ability to provide a safe and rich learning environment depends to a certain degree on its access to material resources. The condition of physical facilities, or access to technology or science laboratories can impact the quality, content and structure of teaching and learning in a school. For example, cramped or inadequate facilities make it difficult for schools and districts to add more teachers or services.[8] The U.S. Government Accounting Office estimates $112 billion is currently needed for school maintenance and repairs, and the U.S. Department of Education estimates the school population will grow by three million over the next decade, requiring some 6,000 new schools.

## About CPRE Briefs

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**7. Organization and Allocation of School and District Resources.** The way resources are allocated and employed can have a positive or negative influence on a teacher's or a school's ability to implement instructional reform. Targeting resources to areas of little consequence for teaching and learning, or spreading resources so thin as to have no effect, hinders educational improvement for all students.

How are state policymakers trying to help local educators build these capacities to meet the challenges of reform? The Consortium for Policy Research in Education examined this question in the first year of a longitudinal study of how federal and state standards-based reforms are interacting with local policies to influence classroom instruction. In 1996-97 we visited eight states: California, Colorado, Florida, Kentucky, Maryland, Michigan, Minnesota and Texas. Members of the research team interviewed approximately 19 policymakers in each of the eight state capitols. Included were chief state school officers, legislative leaders, personnel from the state education departments and representatives of teachers' unions and the business community. The research team examined background documents to supplement and verify the interviews, and to extend our analysis.

We found that almost all of the eight states addressed in some manner each of the seven classroom and organizational capacities described above. The types of policy strategies they used are briefly listed in Tables 1 and 2.

Each state had policies addressing the seven capacities in some manner, but they varied in what capacities they emphasized and in the kinds of polices they used. California, for example, invested heavily to reduce class sizes from kindergarten through grade three. Florida provided financial incentives to reduce kindergarten and first grade class sizes, but none of the other six states placed such a high or specific priority on improving teacher-to-student ratios.

Some of the eight states emphasized capacity-building more than others. Kentucky's efforts were exceptional in many ways: for the diversity of its approaches; for the time and resources devoted to capacity-building; and for its strong curricular guidance and support. Kentucky's relatively keen emphasis on capacity is explained in part by the comprehensiveness of its initial reform legislation, which covered everything from school finance to student health. Kentucky's reforms have enjoyed relative stability over eight years, and the small size and homogeneity of the state made developing capacity-building strategies more manageable. In contrast, other states in our sample were often in early or transitional phases of reform, still developing policy structures or coping with political turmoil.

**Table 1**
**Policy Strategies for Building Classroom Capacity**

| Teachers' Knowledge, Skills and Dispositions | Students' Motivation and Readiness to Learn | Curriculum Materials for Students and Teachers |
|---|---|---|
| State education department staff providing direct support and technical assistance on demand. | Setting promotion and graduation requirements. | Creating curriculum frameworks and supplementary materials. |
| Creating a professional development infrastructure to support districts, schools and teachers. | Rewarding student performance with scholarships and recognition. | Adopting policies governing development and use of curriculum materials. |
| Involving educators in curriculum, assessment and other policy activities. | Creating social services and pre-kindergarten programs. | Creating resource banks of curriculum materials and other instructional materials. |
| Brokering information for districts, schools and teachers. | | Supporting school adoption of national instructional programs. |
| Setting professional development standards, teaching standards, training standards, licensure and certification requirements. | | |

**Table 2**
**Policy Strategies for Building School, District and State Organizational Capacities**

| Quantity and Types of People Supporting the Classroom | Quantity and Quality of Interaction Within and Among Organizational Levels | Material Resources | Organization and Allocation of School and District Resources |
|---|---|---|---|
| Restructuring authority and control relationships (for example, school-based management or decision-making). | Changing class size. | Investing in technology. | Requiring schools and districts to allocate resources according to school improvement plans or through site-based management or decision-making. |
| Creating or supporting professional networks for teachers, schools or districts. | Using program regulations or funding to require certain staff configurations. | Upgrading or expanding facilities. | Using market pressures, such as school choice and charters, to allocate resources in the educational system. |
| Changing climate of failing schools by dismissing staff or transferring staff or students. | Setting district personnel requirements (say, limiting administrator-to-student ratios or specifying positions, such as curriculum specialists). | Setting aside funds for districts, schools or teachers to select their instructional materials. | Consolidating categorical funds. |
| Imposing new leadership (such as state takeover of failing schools or districts). | | | Changing allocation requirements for state and federal funds. |

## Four Common Capacity-Building Strategies

Despite their differences, the eight states in our sample shared four common capacity-building strategies: building external infrastructure to provide professional development and technical assistance; setting professional development and training standards; providing curriculum materials; and organizing and allocating resources.

### *Capacity-Building Strategy One:* Building External Infrastructure to Provide Professional Development and Technical Assistance

State education departments have moved from their traditional regulatory and compliance roles, responding to criticism that such activities stifled local innovation and did little to build improvements in practice.[9] They have begun to offer greater assistance to the teaching and learning process, but *not* by expanding staffs' roles as direct service providers. Instead, the states have created or supported regional service centers and external organizations to perform these functions. Building external infrastructure was the most common state strategy for providing professional development and technical assistance.

The strategy of relying on external infrastructure conforms with the prevailing wisdom that those in closer contact with teachers and schools are in a better position to provide advice and assistance. This thinking is an off-shoot of broader policy arguments that service quality improves as authority is delegated to more local government levels. The strategy also recognizes the practical reality of reduced support for centralized bureaucracies: over the last decade, three of our eight sample states suffered 25 to 50 percent cuts in state-supported staffing.[10] Two of the states have never had large education departments. In no state was staff significantly increased to accommodate new reform responsibilities.

The external infrastructure states used to provide professional development and technical assistance consisted of re-

gional institutions, educational networks, professional associations, and institutions of higher education. Examples of these different types of structures from our eight states are described below.

**Regional Institutions.** Regional service centers or intermediate education units, such as county offices of education, have existed for many years, but their importance as a support strategy has ebbed and flowed. Several study states used these kinds of institutions to serve a variety of purposes and target populations.

- ***Serving State Reform Goals.*** Maryland invested $3 million between 1995 and 1998 to establish Regional Staff Development Centers. These centers provide services related to Maryland's educational reform laws, especially school improvement planning and, more recently, support for newly developing state high school exams.

- ***Serving Specific Programs.*** Colorado's regional Boards of Cooperative Education Services were originally established to provide special education services. In some instances, their role has expanded to serve other local needs, including needs generated by state reform goals.

- ***Serving Member Districts.*** Michigan school districts formed Intermediate Education Units to provide services to member districts. Kentucky created school district consortia to encourage pooling their resources to purchase materials, professional development and other services.

- ***Serving Targeted Districts and Schools.*** Many regional institutions provided support on an as-requested basis, but some were purposely set up to serve specific populations. Maryland located its Regional Staff Development Centers near low-capacity, high need districts. California's Statewide System of School Support served only Title I and low-performing schools. Other states simply encouraged their institutions to focus on higher-need areas. For instance, Texas directed its Regional Service Centers to concentrate on low-performing schools.

**Networks.** States also nurtured or relied upon professional networks of teachers and other educational experts, of schools and of districts to develop local capacity for reform. One kind of network focused on improving the skills of those who participate in them. A second trained and deployed a cadre of experts to offer support to others. A third developed and distributed specific products to provide assistance.

- ***Networks that Improve Knowledge and Skills of Participating Individuals and Organizations.*** These kinds of networks have flourished, especially in California. California had subject-matter networks such as Math Renaissance, a middle-school network funded by the National Science Foundation, a network of restructuring schools, and a pilot network of schools focused on early literacy.

  But perhaps most well-known are California's teacher networks, the Subject-Matter Projects. These networks were modeled after the Bay Area Writing Project, created at the University of California-Berkeley more than 20 years ago. The Bay Area Writing Project sponsored multi-week summer institutes and provided extensive follow-up training during the school year to give participants the time to reflect on their practice. These efforts also allowed teachers time to develop instructional strategies and projects. California built on this successful professional development model by sponsoring new Subject-Matter Projects in subject areas identified by the state's curriculum frameworks. In 1987 the state legislature appropriated funds to support the Subject-Matter Projects in three-year funding cycles, providing a stability that allowed for long-term commitments and the emergence of teacher-leaders. By 1996, Subject-Matter Projects in 11 curriculum areas were operating in 90 sites.

- ***Networks that Deploy Teachers and Other Experts to Assist Local Practitioners.*** The Kentucky Department of Education, as part of its School Transformation and Renewal program, trained a network of Distinguished Educators to work with schools judged by the state accountability index to be either "in decline" or "in crisis." Distinguished Educators helped schools plan for improvement, interpret school performance on the statewide assessments, and align school curriculum with state and national content standards.

  Florida trained more than 400 educators in aligning curriculum to state standards. In turn, they conducted professional development workshops for teachers throughout the state. Minnesota established Best Practice Networks of state-trained practitioners who provided content support to classroom teachers.

- ***Networks that Develop and Distribute Products.*** The Michigan Reading Association and the Michigan Council of Teachers of English, in cooperation with the state department of education, developed content standards

and sample classroom lessons that were piloted in demonstration sites as part of Michigan's English Language Arts Framework project.

The Kentucky Department of Education trained a large cadre of Kentucky Education Reform Act Fellows in standards-based curriculum and assessment. The Fellows piloted the state's curriculum framework, and developed related lessons, assessments and scoring rubrics. State education departments endorsed the Fellows as professional development providers to encourage dissemination of their expertise.

**Professional Associations.** State professional associations, particularly state affiliates of national subject-matter associations and teachers' unions, provided professional development and other kinds of support for reform.

- ***Providing Professional Development.*** The Michigan Reading Association has been a major provider of professional development. Reading specialists conducted dozens of local and regional workshops on reading research during the mid-1980s. The Colorado Council of Teachers of Mathematics, the Kentucky Academy for School Executives and the Kentucky School Boards Association have all provided standards-based training for their members.

- ***Helping to Develop State Policies.*** The Michigan Department of Education has long relied on professional organizations in developing state curriculum policies. The state contracted with the Michigan Reading Association to develop a new framework for the state's high school proficiency test and to work with the Michigan Council of Teachers of English on the state's curriculum frameworks project.

**Higher Education.** States forged stronger and more sustained ties between elementary and secondary education and institutions of higher education. These efforts went beyond traditional pre-service training and credit-hours for experienced teachers to encourage higher education to provide more regular assistance and reform-related professional development.

- ***Professional Development.*** Maryland piloted 13 Professional Development Schools joining ten districts and nine universities and several community colleges. The Professional Development Schools, a key component of the state's redesign of teacher education, provided high-quality internships for pre-service teachers and served as best-practice sites.

- ***Curriculum Support.*** Texas established professional development centers at the University of Texas-Austin and the Dana Center at the University of Texas, and named Texas A & M University to assist the professional development center at one regional Educational Service Center. Many of California's Subject-Matter Projects were hosted by California universities.

## *Capacity-Building Strategy Two:* Setting Professional Development and Training Standards

In addition to the steps state policymakers took to nurture the *supply* of technical assistance and professional development, they were increasingly concerned about the *quality* of professional development. To address this quality issue, all eight states in our sample created standards for professional development and training. This focus on quality was motivated in part by the need to convince governors, legislators and others of the value and necessity of professional development. These players have often expressed skepticism about the worth of professional development, seeing it as of little merit or as a payoff to special interests.

**Standards for Professional Development.** Some states identified standards of good practice for pre-service education, teaching, and professional development. States applied these standards in awarding grants or as targeted program components. States also developed quality criteria for evaluating professional development activities, or for including professional development providers on approved state lists. Some states required local districts to create local professional development plans or to develop criteria for evaluating their local professional development activities. These requirements were often more process-oriented than content-oriented.

- ***State Standards for Professional Development.*** The Maryland Board of Education, as an interim step in developing its own professional development standards, adopted the standards of the National Staff Development Council. Colorado's advisory standards called for professional development that was comprehensive and had a clear purpose; that was designed to engage staff in ongoing efforts to improve student learning; that was focused, rich in content and aligned with state standards

for student learning; that was aligned with the state's reform efforts; and that was designed to build capacity of schools, districts, professionals and the teaching profession to improve student performance.

- ***Quality Criteria.*** Prompted in part by requirements of the federal Improving America's Schools Act, California was planning to build a system of quality indicators based on earlier state evaluations of professional development. Kentucky maintained a list of state-approved professional development providers for school-based decision-making and school leadership.

- ***Local Planning and Review Criteria.*** Texas requires each school's decision-making committee to approve the portion of the campus plan that addresses the school's staff development needs. Kentucky required that district professional development plans include objectives related to the school or district's mission, and an evaluation process. These plans must be approved by Regional Service Centers.

**Improving Pre-Service Education and Teaching.** Teacher certification and institutional accreditation have long been state policy mechanisms to insure that teachers receive adequate and appropriate preparation. To improve these traditional quality control measures, states created their own pre-service standards or revamped their accreditation and accountability processes. Many states joined national organizations and projects with standards-based initiatives.

- ***Standards for Pre-Service Education and Teaching.*** Florida created new pre-service standards and made approval of teacher preparation programs contingent on teacher-candidate performance on its Twelve Educator Accomplished Practices. By 2000, Maryland teacher education programs must show how their curricula incorporate state teaching standards, the Essential Dimensions of Teaching, and other components of the state's redesign for teaching training.

  Minnesota was developing performance-based licensing that included performance assessments for basic skills, pedagogy and content and required a one-year internship with mentoring and ongoing professional development. Kentucky's New Teacher Standards (and New Administrator Standards) required portfolios and performance assessments. Colorado teacher-candidates were required to pass exams aligned to student content standards to enter and exit teacher education programs under the state's Program for Licensing Assessments for Colorado Educators.

- ***National Standards-Based Initiatives.*** Maryland and Kentucky were participating in the National Commission on Teaching and America's Future program, which was developing a blueprint for incorporating changes required by reform. Colorado teachers had the option of undergoing the rigorous certification process of the National Board for Professional Teaching Standards to obtain advanced teaching certificates.

  The National Council for the Accreditation of Teacher Education (NCATE) has aligned its accreditation processes more closely with principles of standards-based reform. Many of the eight states worked with NCATE to review their teacher-training institutions and refashion their accreditation processes. Florida required its teacher-training institutions to obtain NCATE accreditation. Maryland, Michigan and Kentucky also became NCATE partners; Texas was considering a limited relationship; and Colorado modeled its own accreditation standards after those of NCATE.

- ***Accountability.*** Texas was taking steps to encourage teacher-candidates to gain deeper content knowledge by expanding responsibility for teacher preparation. Its Accountability System for Education Preparation would hold an entire institution, not just the college of education, responsible for teacher-candidates' test scores in content and education areas. The initiative proposes withholding additional programs from institutions with low teacher-candidate test results.

## *Capacity-Building Strategy Three:* Providing Curriculum Materials

Standards-based reform calls for states to set challenging goals of *what* students should know and be able to do, and for local districts and states to determine *how* best to meet these objectives. In response, most states developed standards documents at a fairly broad level of detail. These documents did not provide a day-to-day curriculum for teachers to follow. This approach satisfied political and legal constraints that prohibited many states from mandating local curriculum. (Indeed, state policymakers in some states felt that they could not even advise local schools and districts about or identify suitable curriculum.) Some reform advocates suggest that

this broader design encourages more challenging thinking skills by emphasizing concepts and big ideas rather than the rote memorization of facts.

These arguments have had a significant impact, even in states that once offered detailed curriculum guidance to schools. The 1997 Texas Essential Knowledge and Skills Standards focused on concepts and no longer specified names and dates or books to be studied. Despite arguments in favor of highly-specific standards, policymakers in Texas and many other states have maintained a broader, more general approach to academic standards.

As states have implemented their reform initiatives, however, they have been asked to play a more active role in helping local educators to find or develop curriculum materials that addressed the standards. Districts frequently complained that state standards were too general to effectively guide local curriculum or instruction, and that district and school staff did not have the resources, time or expertise—the capacity—to translate these broad standards into practice.

The eight sample states acted to address this curriculum gap in a variety of ways.

- ***Curriculum Frameworks and Other Materials.*** To fill the gap, most states developed more detailed frameworks with examples of how the standards could be used in instruction. Florida's curriculum frameworks, for example, provided models of good teaching, learning and assessment.

  In addition to its frameworks, California published curriculum and program advisories, lists of educational materials (in addition to approved textbooks), model curriculum guides, and task force reports to provide guidance while frameworks were being revised. For example, California's reading program advisory described the rationale and research base for the recommended approach to teaching early reading, and included grade-level expectations, examples of classroom practice, and a sample timeline for reading curriculum from pre-kindergarten through the eighth grade. California also produced replacement units, instructional units on specific math topics intended as an interim step until aligned textbook materials were available.

- ***Resource Banks.*** Texas, Florida, Kentucky and Colorado used new technologies to provide ready access and cost-effective dissemination of instruction-related materials. Texas was developing content and teaching vignettes to be available on compact discs and on the Internet. Florida's Tech 2000 initiative created a database of standards-based resources available to an online community of teachers and staff developers. Future Tech 2000 plans included distributing CD-ROMs of best practices in content areas, training teachers to navigate the Internet for teaching resources, developing Electronic Curriculum Planning Tools based on state standards and frameworks, and helping teachers to develop classroom assessments.

  Maryland supported district efforts to develop a resource bank of classroom-based performance assessments at the elementary, middle, and more recently, the high school levels.

- ***Supporting Effective Programs.*** As a New American Schools scaling-up site, Maryland intended that 30 percent of its districts would adopt effective-practices models by 2000. The state education department was using effective-practices criteria in evaluating Goals 2000 applications. In addition, the state assisted districts in selecting reform designs, identifying implementation resources, and networking.

  The Kentucky Department of Education called attention to the Different Ways of Knowing program (developed by the California-based GALEF Institute) because it was viewed as compatible with state standards. While Kentucky did not finance this program, it has held press conferences and provided other informal support. Kentucky also sponsored a 1997 Showcase Conference highlighting 12 research-based programs that demonstrated improved student achievement on various assessments.

## *Capacity-Building Strategy Four:* Organizing and Allocating Resources

Over the past decade, policymakers have pushed more and more decision to the school-level. This strategy is premised in part on research showing that schools, more than districts, can make a crucial difference in student performance.

Reflecting this shift, all eight sample states had instituted some form of school improvement planning. Several states viewed school improvement planning as a key component of their reform initiatives. School improvement planning linked top-down state reform goals with bottom-up local decision-making. In this model, schools would identify their needs in terms

of state reform goals, then allocate funds, time, personnel, professional development and other resources to meet them.

The states linked school improvement planning requirements either to their accountability systems or to site-based decision-making processes.

- ***Linked to Accountability Systems.*** The Maryland accountability system required every school not meeting state performance standards in every area to develop a school improvement plan.

  Florida required every school to develop annual school improvement plans that assessed school performance relative to the state's eight education goals. The plans described the activities the school would undertake to address the state goals and performance standards; districts established their own measures of annual progress and self-evaluation methods. Concerned about schools that were not setting challenging targets, Florida recently set its own criteria for low performance. The state provided technical assistance to schools that failed to meet their own or state criteria, and could trigger other state interventions if schools failed to make satisfactory progress.

  California required schools to produce school improvement plans as part of the state's Program Quality Review Process. Michigan and Colorado incorporated school improvement planning into their accreditation processes.

- ***Linked to Site-Based Decision-Making.*** Kentucky and Texas embedded school improvement planning in their regulations governing site-based decision-making. Texas required annual plans and Kentucky required plans every two years.

In sum, the states' capacity-building strategies for reform were highly decentralized, perhaps best exemplified in how the states turned to external institutions and organizations to meet professional development needs. The decentralized approach was also reflected in how the states addressed curriculum needs—from providing multiple options to taking no position at all. Even the state professional development standards and school improvement planning requirements allowed substantial flexibility and local control.

These strategies reflected a standards-based philosophy of school improvement: the state should set standards not curriculum; instructional decisions are best made locally; and schools should be accountable for performance results. Indeed, the degree of conformity in the eight states' capacity-building strategies reflect the lesson that policy ideas are influential and can affect decisions across diverse environments.

But it would be simplistic to overstate these trends in our small sample. Some of the states had major strategies in other areas not reported here because they were not common across all eight states. Policymakers in Kentucky and California, for example, demonstrated a strong fiscal commitment to professional development, countering the traditional skepticism toward this activity. Policy ideas do matter, but they also interact with state politics, leadership, political traditions, the capacity of state education departments, and local needs.

## Promising Strategies

Visits to the eight sample states provided promising evidence that many policymakers were paying serious attention to building local capacity to improve teaching and learning, and undertaking multiple efforts to support their reform initiatives.

**Locating Assistance Closer to Schools.** To increase their orientation toward service, the state education departments worked to create decentralized support systems involving a diverse cast of actors. Such steps may help to institutionalize and stabilize reform efforts and sites for capacity-building. Improvements are more likely to result, the research suggests, when teachers and schools are supported by longer-than-usual workshops and in ways tailored to their local settings.[12] Early findings from Kentucky, for example, showed that with the ongoing support of Distinguished Educators, 63 percent of the schools deemed in decline achieved gains that placed them in the reward category in the next accountability cycle.[13] Further study is needed to understand the role these educators play in building schools' capacity to change. But the results suggest that individuals and organizations that work directly with schools may be better positioned to offer the kind of specific and sustained support that can yield real improvements.

**Professional Networks.** Policymakers in several states paid increased attention to creating professional networks of educators. Studies suggest that these networks offered teachers access to new knowledge, fostered a strong sense of professionalism, and provided opportunities outside their own schools to see other forms of practice and interaction.[14] Breaking the isolation typical of teaching and providing the

kinds of professional opportunities long enjoyed by higher education faculty can contribute to improved practice.[15]

**Curriculum Guidance.** The states responded to local requests for more specific curriculum guidance and for curriculum models that addressed state reform goals and could improve student performance. States provided access to curriculum materials and distributed curriculum frameworks that included examples of standards-based instruction and high performance. Several states began considering curriculum-specific professional development.

The importance of curriculum-specific support has been underlined by research studies demonstrating that professional development closely connected to what students learn can be a powerful lever for school improvement, far more influential than training sessions based on vague and ambiguous reform principles. CPRE researchers contrasted teachers' practice and student outcomes following professional development closely aligned to the California Mathematics Framework with professional development only peripherally related to the mathematics curriculum. California teachers who participated in curriculum-specific workshops reported more reform-oriented practice in their classrooms. This kind of professional development was also associated with better student performance on the state's mathematics assessment, especially when the professional development was connected to other elements of instruction (such as student curriculum and assessment) and was extended in time.[16] Another study found that California teachers' participation in workshops centered on the student mathematics curriculum positively influenced their behavior and classroom practice. Participation in curriculum-centered workshops, in comparison to more general workshops, prompted teacher involvement in reform-related activities and reform-related practice.[17]

**Professional Development Standards.** State adoption of quality standards for professional development and preservice training may indicate a willingness to consider stronger designs and greater investment in this area. It may reflect an interest in directing professional development toward activities that foster real improvements in teaching and learning. Teachers, administrators and policymakers have long questioned the quality of most professional development activities. Addressing the quality of professional development is essential to building local capacity for reform.

## Continuing Challenges

The capacity-building strategies common to the eight states also raise questions about potential problems.

**Capacity of the Infrastructure External to the State Education Departments.** States turned to external organizations in keeping with the philosophy that those closer to the field are better positioned to provide regular, sustained and relevant assistance to teachers and schools. The turn to external organizations was also a way of coping with the limited capacity of the state education agencies. It is necessary, however, to assess how much and what kind of assistance these external organizations can realistically provide. The number of such institutions varied across the eight states. The large, populous states of California and Texas had a relatively large number and range of regional institutions. Still, staff of these external organizations were expected to serve many districts, schools and teachers across large geographical areas. Even in smaller states, organizational staff were stretched. Each of Kentucky's Regional Service Centers had just one staff person to provide curricular support to about 25 districts and 100 to 125 schools, contributing at least in part to high staff turnover. The capacity of Michigan's Intermediate Service Districts was directly related to the wealth of their funding districts.

State departments of education are not able to serve all teachers and schools, but these external organizations may not have the fiscal and human resources to do so either. Can these external organizations provide the continuing assistance policymakers have in mind? Do the staff of these institutions have the requisite knowledge and skills to provide appropriate assistance? Policymakers in the sample states recognized the staffing constraints of these organizations when they requested that they target their energies to the lowest-performing schools and districts.

State size and funding availability are other factors affecting the effectiveness of these external organizations. Large states require a dense network of providers and need stable funding. The three-year funding cycles established by the California Legislature enabled the Subject-Matter Projects to plan and engage teachers on an extended basis. The allocation of state funds, and active state leadership, can help sustain teacher networks.

**Usefulness of Performance Data.** Reform advocates believe that student performance data will drive change in schools and districts. The accountability system will provide feedback on school performance, the theory goes, which will be used in school improvement planning. The system of varying rewards and sanctions will further motivate teachers and schools to improve. This accountability model requires that the performance data are transparent—that practitioners understand what the results mean—and that teachers and administrators have the knowledge and skills to translate performance date into appropriate action. The evidence in our eight states, however, suggests that student performance data did not meet these criteria.

Part of the challenge lies in the way student outcome data are incorporated into state accountability formulas. In an effort to be fair, policymakers have created complex formulas for measuring student performance. Some states used multiple measures, including student dropout and attendance rates, for example, with test results. Others created complicated ways of measuring progress over an extended period of time to avoid penalizing schools for natural fluctuations in the data from year to year. But the trade-off of such efforts can be results that few can explain or readily understand, making it difficult to translate data into improvements in programs or school structures.

Even simple testing data, however, do not always have obvious implications for schoolwide improvement. Since most states measure student performance in certain grades and subjects, teachers in non-tested areas receive no feedback on their students' performance.

Teachers who received individual student results still might have trouble interpreting what the test results imply for changing their practice. Teachers typically receive little assessment training in teacher education programs. Criterion-referenced and performance-based assessments provide more direct evidence of students' understanding and abilities to write, think and solve problems than traditional norm-referenced exams, but teachers still need the knowledge and skills to translate that information into classroom improvements. Once informed that their students have trouble understanding graphs, for example, teachers still must find better ways to teach and help their students to learn about graphs. In a discussion about improving assessment, one state policymaker noted, "Just because you know how to weigh a pig better doesn't mean it will get fatter."

A few states helped teachers and administrators to understand and interpret performance data, particularly in low performing schools. Kentucky's Distinguished Educators provided focused assistance in this area for schools in decline or crisis. As a professional development activity, Maryland and Minnesota involved teachers in developing and scoring assessments. However, translation of data into improved teaching and learning is an area that still needs more attention.

**Building Capacity of Middle-Performing Schools.** Many states' capacity-building strategies funneled staff and resources into low-performing schools, thereby maximizing the states' limited resources and providing assistance to areas of greatest need.[18] But how can schools in the middle of the performance distribution find the support needed to improve?

The middle-performing schools had a long way to go to meet challenging state standards. Only 2.5 percent of Maryland's elementary schools, 4.5 percent of its middle schools, and 59.9 percent of its high schools met or exceeded the state's "satisfactory" standard in 1996. By the year 2000, Maryland aims to have 70 percent of its elementary and middle school students and 90 percent of its high school students meet or exceed the standards. Of Kentucky's fourth grade students in 1995-96, 31 percent met the "proficient" standard in reading; 14 percent did so in mathematics; 3 percent in science; 13 percent in social studies; and 18 percent in writing. Kentucky expected that *all* schools will achieve an accountability index of 100 by 2012. Clearly, support is needed for schools beyond those at the low end of the performance distribution.

**Continuity in Capacity-Building.** The states have made considerable progress in developing and adopting academic standards, but these efforts have not gone unchallenged, and future challenges are likely in store. Maintaining some continuity and stability during periods of conflict is important to sustaining and continuing capacity-building efforts.

California, a leader in standards-based reform and new instructional approaches for nearly a decade, began to experience reversals in the mid-1990s after poor state showings on the National Assessment of Educational Progress tests. The state's new performance assessment system was canceled, the state's progressive curriculum frameworks for mathematics and language arts were questioned, and major revisions in state academic content and testing policies were enacted. A multitude of standards were presented and, in the absence of consensus, confusion reigned. Lack of consensus is not limited to California. The question is, can policymakers maintain and expand their reform initiatives in the face of politically-

charged discord? Or will reform efforts suffer the effects of policy disintegration and contradictory direction? Without some stability and coherence, efforts to build capacity will suffer.

Even absent substantial discord, state policymakers must be careful to send clear, consistent and coherent messages, and not to overwhelm schools and districts with too many messages. Fragmented and surplus standard-setting exists. Some states have set standards for the teaching profession, standards for new teachers, standards for teacher education programs, criteria for local professional development, criteria for state professional development grants, and guidelines for local teacher professional development plans. Federal and local education agencies may have competing standards and criteria. It is a confusing array that schools and districts must see their way through to develop a sound capacity-building strategy.

**Incentives for Capacity-Building.** Capacity-building strategies must take into account people's motivation to participate in them. Do the states' common capacity-building strategies described here offer sufficient incentives for teachers, administrators and students? Many policymakers in our eight sample states expressed reservations.

- ***Incentives to heed professional development standards.*** Professional development standards must be taken seriously if they are to improve the quality of teachers' learning opportunities.

But, are there adequate incentives for schools and districts to follow state professional development standards? These were generally recommended, not mandatory, standards. Some states used their standards in awarding grants, judging programs and conducting state professional development activities. But, because few states provided state funds for local professional development, most districts relied on their general funds to support such activities. What incentives exist to encourage schools and districts to mold locally-funded professional development activities to state standards? Further, do professional development providers have any motivation to comply with state standards?

Are state professional development standards sufficiently specific to influence the nature and quality of professional development? The professional development standards in many states were often only tangentially linked to student performance goals. Furthermore, like most curriculum approaches and school-based reform efforts, professional development programs have not been rigorously evaluated for their impact on student achievement. Given inadequate evaluation data, it is difficult for schools and districts to pressure providers to improve the quality of professional development activities.

- ***Incentives to Improve Teacher Training Institutions.*** State policymakers believed institutions of higher education had few or weak incentives to provide reform-related support to teachers.

High failure rates on state-mandated tests and other licensure requirements could impugn the reputations of teacher preparation programs. However, states are often pressured to modify licensure standards. In one state where teaching candidates performed poorly on tests required for provisional teaching certification in certain content areas, the state planned to lower cut scores to prevent teacher shortages in those areas.

Teacher shortages are a continuing obstacle to raising standards for pre-service and in-service teachers. California, Colorado, Florida and Texas had serious shortages of special education and bilingual teachers. Colorado planned to recognize undergraduate, rather than graduate-level, preparation programs for special education. Other states consolidated special education endorsements into generic K-12 endorsements. California's teacher-shortage problem was exacerbated by state efforts to reduce primary grade class sizes for the 1996-97 school year: because sufficient licensed teachers could not be recruited on short notice to fill the thousands of new positions, many teachers were hired under emergency permits. California's effort to build capacity to improve teaching and learning by reducing the teacher-student ratio negatively affected the state's ongoing efforts to build capacity by improving the knowledge and skills of entry-level teachers. Many states encouraged or required teacher preparation institutions to meet more rigorous accreditation standards. Several state policymakers argued, however, that accreditation was a weak policy instrument because so few institutions ever lost accreditation. Closing a teacher preparation program could contradict historical and legal notions of academic freedom, and trigger political fall-out, especially where they are major employers.

- ***Incentives for Teachers to Pursue Professional Development.*** Many states' relicensure standards required teachers to participate in ongoing professional development, but some state policymakers questioned whether such incentives truly engage teachers in continuous professional learning.

Teachers may view professional development requirements as bureaucratic hurdles rather than serious opportunities to improve their practice. Teachers' organizations and others have opposed state initiatives specifying that continuing education credits be in reform-related areas or even in teachers' subject areas. School improvement and other planning initiatives have not insured that teachers select professional development activities that support reform principles or school needs.

- ***Incentives to Hold All Students to High Standards.*** Some states have incorporated incentives for including *all* students in their testing programs and accountability designs.

Kentucky, Maryland and Colorado have implemented strategies that ranged from enforcing stricter rules for excluding students from statewide tests and stricter monitoring of compliance with these rules, to awarding a zero score to untested students and including these scores in overall accountability calculations. These steps were meant to discourage teachers and administrators from unofficially persuading students to miss school on test days. Still, many policymakers expressed concern that, despite these efforts, some schools still found it most advantageous to exclude the lowest performers from high-stakes systems. Policymakers noted that some schools and districts were focusing on students closest to meeting state standards, while ignoring those at the bottom of the performance distribution.

- ***Incentives to Engage in the School Improvement Planning Process.*** State policymakers saw school improvement planning as a necessary component of the change process, but the seriousness and quality of local efforts remained unclear.

The states varied in their monitoring and support of the school improvement planning process. Maryland reviewed plans of and provided assistance only to low-performing, reconstitution-eligible schools. Florida stipulated that district failure to collect school improvement plans could mean loss of state lottery funds. Texas, Kentucky and Colorado collected school improvement plans only if they were required for grant applications. Kentucky, Maryland and California linked allocation of state financial support and technical assistance to school improvement plans; Colorado and Texas did not. The incentives to take the school improvement planning process seriously in the sample states ranged from weak to strong. It is unclear whether schools had the knowledge and motivation to employ these processes effectively. Schools might be highly motivated when the planning activities are monitored with serious consequences for failure to comply, but do they have the skills to create an effective change strategy? Further, do schools have the authority to implement school improvement plans, and sufficient control over human and financial resources?

## Capacity-Building Checklist for Policymakers

We encourage policymakers to consider the entire education system when designing their capacity-building strategies. Our framework of seven classroom and organizational capacities may provide a useful checklist. In conducting such a survey, we would recommend keeping in mind the following questions:

- Does the state's regional infrastructure have adequate resources, knowledge and people-power to provide professional development, technical assistance and other assigned responsibilities? Do the regional institutions use high-quality professional development and technical assistance models?

- Does the state policy system send clear and coherent signals to schools and teachers about building needed knowledge and skills? Does the state provide sufficient guidance about curriculum and instructional materials?

- Can the state play a role in encouraging and brokering research on curriculum and instructional practices that improve the performance of *all* students?

- Do the state's capacity-building initiatives meet the following research-supported criteria: Are the initiatives well-suited to individual school settings? Are the initiatives extended over time, providing opportunities for feedback and reflection? Are the initiatives reform-linked and curriculum-specific?

- Does the state or do school districts have a strategy for helping schools to translate information generated by state accountability and assessment programs into improved practice?

- How can the state increase capacity to assist schools in the middle of the performance distribution?

- Do the state's initiatives provide adequate incentives—for students, teachers, schools, districts, institutions of

higher education and other external organizations—to build capacity that is aligned with standards-based reform? Are there incentives to bring *all* students to state performance standards?

## About the Author

Diane Massell is a project manager with the Consortium for Policy Research in Education (CPRE) at the University of Pennsylvania. She is co-principal investigator of the multi-state study, Education Policy Reform: From Congress to the Classroom. Her other areas of research include the process and politics of state content standards, and state and local factors influencing performance-based assessment. She co-authored the CPRE research reports, *Persistence and Change: Standards-Based Reform in Nine States* and *Ten Years of State Education Reform, 1983-1993: Update with Four Case Studies*, and co-edited and authored a special issue of *Education and Urban Society*, entitled "Setting National Content Standards."

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Copies of Diane Massell's full-length report, "State Strategies for Building Capacity in Education: Progress and Continuing Challenges," will be published as a *CPRE Research Report* in Summer 1998; the cost is $12.00. Ordering instructions are listed below. When ordering, please reference report # RR-041.

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